

Efficacy of yoga as adjunct treatment of post-traumatic stress disorder compared to cognitive behavioral therapy and medication treatment alone



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Abstract

Post-traumatic stress disorder (PTSD) is a condition that can affect anyone who experiences or witnesses a traumatic event. The current treatment guidelines for PTSD include psychological and pharmacological therapy. These therapies may not be available to everyone and compliance is a concern. This review investigates the use of yoga as adjunct treatment of PTSD symptoms in women age 18-65 who have post-traumatic stress disorder compared to conventional CBT and medication treatment alone.

Introduction

Post-traumatic Stress Disorder

Significance

- In addition to military induced trauma, 6 out of 10 men and 5 out of 10 women will undergo trauma at some point in their life
- Women are more likely to undergo sexual assault and child abuse
- Men are more likely to undergo accidents, combat, or physical assault

Diagnosis

- DSM-5 criteria includes exposure to trauma coupled with re-experiencing the event, avoidance of triggers, negative thoughts or feelings, and changes in arousal

Treatment

- A barrier to treatment is avoidance
- Psychological therapy such as cognitive behavioral therapy, exposure therapy, and processing therapy
- Pharmacological therapy such as SSRIs (sertraline and paroxetine) or SNRIs

Methods

Literature search

- November 2018 databases
 - Google/Google Scholar, Clinical Key, PubMed
- Search terms:
 - “Mind-body or meditation or yoga AND PTSD or post traumatic stress disorder”
 - “Yoga, PTSD, women”
 - “Post traumatic stress disorder OR PTSD,” “women,” and “yoga OR mindfulness OR breathing.”
- Inclusion criteria
 - Reputable source, randomized control trials, clinical trials, and women >18 years old
- Exclusion criteria
 - Systematic reviews, meta analyses, research studies that only included men, research studies that only included children, animal studies

Results

Jindani F, Turner N, Khalsa SBS. A yoga intervention for posttraumatic stress: A preliminary randomized control trial. Evidence-Based Complementary and Alternative Medicine. 2015. doi:10.1155/2015/351746.

- Kunalini yoga → both groups experienced decreased PTSD symptoms.

Martin EC, Dick AM, Scioli-Salter ER, Mitchell KS. Impact of a yoga intervention on physical activity, self-efficacy, and motivation in women with PTSD symptoms. Journal of Alternative and Complementary Medicine. 2015;21(6):327-32. doi:10.1089/acm.2014.0389.

- Impact of yoga on self-efficacy and intrinsic motivation → only a significant decrease in external regulation (which may predict that they are on their way to an increase in intrinsic motivation).

Mitchell KS, Dick AM, DiMartino DM, et al. A pilot study of a randomized controlled trial of yoga as an intervention for PTSD symptoms in women. Journal of Trauma Stress. 2014;27(2):121-128. doi:10.1002/jts.21903.

- Adjunct Kriplau based yoga → both the yoga and control group had statistically significant decreases in PTSD symptoms

Price M, Spinazzola J, Musicaro R, et al. Effectiveness of an extended yoga treatment for women with chronic posttraumatic stress disorder. Journal of Alternative and Complementary Medicine. 2017;23(4):300-309. doi:10.1089/acm.2015.0266.

- Extended yoga intervention → participants overall had decreased PTSD and dissociative symptoms after the study, even more-so than the 10-week study that was previously done.

Rhodes A, Spinazzola J, van der Kolk B. Yoga for adult women with chronic PTSD: A long-term follow-up study. Journal of Alternative and Complementary Medicine. 2016;22(3):189-96. doi:10.1089/acm.2014.0407.

- Long-term benefits of yoga in PTSD → frequently practicing yoga predicted a larger decrease in the severity of PTSD symptoms and depression symptoms

van der Kolk BA, Stone L, West J, et al. Yoga as an adjunctive treatment for posttraumatic stress disorder: A randomized control trial. Journal of Clinical Psychiatry. 2014;75(6):559-65. doi:10.4088/JCP.13m08561.

- At the end of the study, 52% of participants in the yoga group and 21% of participants in the control group no longer met criteria for PTSD

Study	Total N	Assignment groups	Treatment regimen
Jindani F, Turner N, Khalsa SBS	N=80	Kundalini yoga or control group	One 90 minute Kundalini yoga class per week x 8 weeks
Martin EC, Dick AM, Scioli-Salter ER, et al.	N=38	Yoga or assessment-only control group	Choice between 2 sessions per week for 6 weeks or 1 session per week for 12 weeks
Mitchell KS, Dick AM, DiMartino DM, et al.	N=38	Kriplau based yoga or assessment-only control group	Choice between 2 sessions per week for 6 weeks or 1 session per week for 12 weeks
Price M, Spinazzola J, Musicaro R, et al.	N=9	Trauma-informed yoga, no control group bc extension of van der Kolk’s study	One 1 hour yoga class per week x 20 weeks Three 30 min DVD/CD home yoga classes per week
Rhodes A, Spinazzola J, van der Kolk B.	N=49	From van der Kolk’s study, 26 were in yoga group and 23 were in control group w/ intervention after study	One 1 hour yoga class per week x 10 weeks
van der Kolk BA, Stone L, West J, et al.	N=64	Trauma-informed yoga or supportive women’s health education	One 1 hour yoga class per week x 10 weeks

Discussion

Overall, each study found yoga as adjunct therapy in the treatment of PTSD to be beneficial with at least one statistically significant result of outcome measures. In addition, the study by Rhodes that extended van der Kolk’s study specifically found that frequently practicing yoga predicted larger decreases in the severity of PTSD and depression symptoms. Participants who continued to practice yoga were more likely to lose their PTSD diagnosis.

Strengths

- Extensions of previous research
- All studies randomized (yoga vs. control)

Limitations

- Small populations
- Volunteer effect

Future research

- A larger and more comprehensive patient population will help to increase generalizability of the results and longer treatment and follow up will help to increase validity and power



Conclusion

Although the current research cannot fully be confirmed despite some statistically significant findings, the clinical significance and lack of adverse outcomes indicate that yoga should still be considered as an adjunct therapy in the treatment of PTSD. This is for a variety of reasons including possible lack of access to CBT and medication treatment and lack of compliance with treatment. This is especially so in different socioeconomic, ethnic, or cultural groups who may not be able to afford treatment or may not be willing to undergo pharmacological or psychological treatment due to personal beliefs.

Each of these issues regarding the current treatment of PTSD are important to consider in clinical practice, as many people are unable to tolerate current pharmacological treatment options or do not have access to conventional psychotherapeutic options. Since studies overall found that the yoga treatment groups had statistically significant reduction in PTSD symptoms, there is evidence that yoga can also provide clinically significant reductions in symptoms and therefore be a beneficial adjunct therapy for patients. In addition, lack of adverse outcomes is a compelling reason for health care providers to at least try this form of complementary, alternative therapy.

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